

ABSTRACT

The invention relates to a computer system and method for simulating transport phenomena in a complex system. The computer system comprises a logic interface that enables a user of the computer system to dynamically construct logic to customize simulation of the physical system, a means for converting the constructed logic into corresponding object-oriented code, a means for integrating the object-oriented code with the main simulation system which comprises a simulation data model and simulation algorithms, resulting in an integrated simulation system, and a means for executing the integrated simulation system.